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DOCUMENT-IDENTIFIER: US 20030004894 A1
TITLE: System, method and article of manufacture for secure network electronic payment
and credit collection

Summary of Invention Paragraph (4):
[0002] It is desirable for a computer operated under the control of a merchant to
obtain information offered by a customer and transmitted by a computer operating under
the control of the customer over a publicly accessible packet-switched network (e.g.,
the Internet) to the computer operating under the control of the merchant, without
risking the exposure of the information to interception by third parties that have
access to the network, and to assure that the information is from an authentic source.
It is further desirable to have the ability for the merchant to transmit information,
including a subset of the information provided by the customer, over such a network to
a payment gateway computer system that is authorized, by a bank or other financial
institution that has the responsibility of providing payment on behalf of the customer,
to authorize a commercial transaction on behalf of such a financial institution,
without the risk of exposing that information to interception by third parties. Such
institutions include, for example, financial institutions offering credit or debit card
services.

Summary of Invention Paragraph (6):
[0004] Another such attempt to provide such a secure transmission channel is a
general-purpose secure communication protocol such as Netscape, Inc.'s Secure Sockets
Layer (hereinafter "SSL"), as described in Freier, Karlton & Kocher (hereinafter
"Freier"), The SSL Protocol Version 3.0, March 1996, and hereby incorporated by
reference. SSL provides a means for secure transmission between two computers. SSL has
the advantage that it does not require special-purpose software to be installed on the
customer's computer because it is already incorporated into widely available software
that many people utilize as their standard Internet access medium, and does not require
that the customer interact with any third-party certification authority. Instead, the
support for SSL may be incorporated into software already in use by the customer, e.g.,
the Netscape Navigator World Wide Web browsing tool. However, although a computer on an
SSL connection may initiate a second SSL connection to another computer, a drawback to
the SSL approach is each SSL connection supports only a two-computer connection.
Therefore, SSL does not provide a mechanism for transmitting encoded information to a
merchant for retransmission to a payment gateway such that a subset of the information
is readable to the payment gateway but not to the merchant. Although SSL allows for
robustly secure two-party data transmission, it does not meet the ultimate need of the
electronic commerce market for robustly secure three-party data transmission. Other
examples of general-purpose secure communication protocols include Private
Communications Technology ("PCT") from Microsoft, Inc., Secure Hyper-Text Transport
Protocol ("SHTTP") from Theresa Systems, Shen, Kerberos, Photuris, Pretty Good Privacy
("PGP") and Ipv6 which meets the IPSEC criteria. One of ordinary skill in the art will
readily comprehend that any of the general-purpose secure communication protocols can
be substituted for the SSL transmission protocol without undue experimentation.

Detail Description Paragraph (2):
[0023] A preferred embodiment of a system in accordance with the present invention is
preferably practiced in the context of a personal computer such as the IBM PS/2, Apple
Macintosh computer or UNIX based workstation. A representative hardware environment is
depicted in FIG. 1A, which illustrates a typical hardware configuration of a
workstation in accordance with a preferred embodiment having a central processing unit
10, such as a microprocessor, and a number of other units interconnected via a system
bus 12. The workstation shown in FIG. 1A includes a Random Access Memory (RAM) 14, Read
Only Memory (ROM) 16, an I/O adapter 18 for connecting peripheral devices such as disk
storage units 20 to the bus 12, a user interface adapter 22 for connecting a keyboard

24, a mouse 26, a speaker 28, a microphone 32, and/or other user interface devices such as a touch screen (not shown) to the bus 12, communication adapter 34 for connecting the workstation to a communication network (e.g., a data processing network) and a display adapter 36 for connecting the bus 12 to a display device 38. The workstation typically has resident thereon an operating system such as the Microsoft Windows Operating System (OS), the IBM OS/2 operating system, the MAC OS, or UNIX operating system. Those skilled in the art will appreciate that the present invention may also be implemented on platforms and operating systems other than those mentioned.

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DOCUMENT-IDENTIFIER: US 5996076 A
TITLE: System, method and article of manufacture for secure digital certification of electronic commerce

Brief Summary Text (13):
It is desirable for a computer operated under the control of a merchant to obtain information offered by a customer and transmitted by a computer operating under the control of the customer over a publicly accessible packet-switched network (e.g., the Internet) to the computer operating under the control of the merchant, without risking the exposure of the information to interception by third parties that have access to the network, and to assure that the information is from an authentic source. It is further desirable for the merchant to transmit information, including a subset of the information provided by the customer, over such a network to a payment gateway computer system that is authorized, by a bank or other financial institution that has the responsibility of providing payment on behalf of the customer, to authorize a commercial transaction on behalf of such a financial institution, without the risk of exposing that information to interception by third parties. Such institutions include, for example, financial institutions offering credit or debit card services.

Brief Summary Text (15):
Another such attempt to provide such a secure transmission channel is a general-purpose secure communication protocol such as Netscape, Inc.'s Secure Sockets Layer (hereinafter "SSL"), as described in Freier, Karlton & Kocher (hereinafter "Freier"), The SSL Protocol Version 3.0, March 1996, and hereby incorporated by reference. SSL provides a means for secure transmission between two computers. SSL has the advantage that it does not require special-purpose software to be installed on the customer's computer because it is already incorporated into widely available software that many people utilize as their standard Internet access medium, and does not require that the customer interact with any third-party certification authority. Instead, the support for SSL may be incorporated into software already in use by the customer, e.g., the Netscape Navigator World Wide Web browsing tool. However, although a computer on an SSL connection may initiate a second SSL connection to another computer, a drawback to the SSL approach is each SSL connection supports only a two-computer connection. Therefore, SSL does not provide a mechanism for transmitting encoded information to a merchant for retransmission to a payment gateway such that a subset of the information is readable to the payment gateway but not to the merchant. Although SSL allows for robustly secure two-party data transmission, it does not meet the ultimate need of the electronic commerce market for robustly secure three-party data transmission. Other examples of general-purpose secure communication protocols include Private Communications Technology ("PCT") from Microsoft, Inc., Secure Hyper-Text Transport Protocol ("SHTTP") from Theresa Systems, Shen, Kerberos, Photuris, Pretty Good Privacy ("PGP") and Ipv6 which meets the IPSEC criteria. One of ordinary skill in the art readily comprehends that any of the general-purpose secure communication protocols can be substituted for the SSL transmission protocol without undue experimentation.

Detailed Description Text (2):
A preferred embodiment of a system in accordance with the present invention is preferably practiced in the context of a personal computer such as the IBM PS/2, Apple Macintosh computer or UNIX based workstation. A representative hardware environment is depicted in FIG. 1A, which illustrates a typical hardware configuration of a workstation in accordance with a preferred embodiment having a central processing unit 10, such as a microprocessor, and a number of other units interconnected via a system bus 12. The workstation shown in FIG. 1A includes a Random Access Memory (RAM) 14, Read Only Memory (ROM) 16, an I/O adapter 18 for connecting peripheral devices such as disk storage units 20 to the bus 12, a user interface adapter 22 for connecting a keyboard 24, a mouse 26, a speaker 28, a microphone 32, and/or other user interface devices such

as a touch screen (not shown) to the bus 12, communication adapter 34 for connecting the workstation to a communication network (e.g., a data processing network) and a display adapter 36 for connecting the bus 12 to a display device 38. The workstation typically has <u>resident</u> thereon an <u>operating system</u> such as the Microsoft Windows <u>Operating System (OS)</u>, the IBM OS/2 <u>operating system,</u> the MAC <u>OS,</u> or UNIX <u>operating system</u>. Those skilled in the art appreciates that the present invention may also be implemented on platforms and <u>operating systems</u> other than those mentioned.

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L10: Entry 6 of 9   File: USPT   Apr 16, 2002

DOCUMENT-IDENTIFIER: US 6373950 B1
TITLE: System, method and article of manufacture for transmitting messages within
messages utilizing an extensible, flexible architecture

Abstract Text (1):
Secure transmission of data is provided between a plurality of computer systems over a
public communication system, such as the Internet. Secure transmission of data is
provided from a customer computer system to a merchant computer system, and for the
further secure transmission of payment information regarding a payment instrument from
the merchant computer system to a payment gateway computer system. The payment gateway
system formats transaction information appropriately and transmits the transaction to
the particular host legacy system. The host legacy system evaluates the payment
information and returns a level of authorization of credit to the gateway which
packages the information to form a secure transaction which is transmitted to the
merchant which is in turn communicated to the customer by the merchant. The merchant
can then determine whether to accept the payment instrument tendered or deny credit and
require another payment instrument. An architecture that provides support for
additional message types that are value-added extensions to the basic SET protocol, is
provided by a preferred embodiment of the invention. The merchant can then determine
whether to accept the payment instrument tendered or deny credit and require another
payment instrument. An architecture that provides support for additional message types
that are not SET compliant is provided by a preferred embodiment of the invention. An
architecture for transmitting messages from a merchant-controlled computer system, such
as a server, to an acquirer-controlled computer system, such as a gateway, is
disclosed. The merchant-controlled computer system defines messages as text name-value
pairs, and encrypts them using an encryption scheme such as PKCS-7. The encrypted
name-value pairs are encoded into a text sequence using a text-encoding scheme such as
Multipurpose Internet Mail Extensions encoding. The messages are transmitted to the
acquirer-controlled computer as payload data in a transmission block. The messages may
be used, for example, to command the acquirer-controlled computer to perform
settlement/reconciliation, to notify the acquirer-controlled computer of a logon or
logoff operation, or to request the acquirer-controlled computer to transmit its
parameter values.

Brief Summary Text (13):
It is desirable for a computer operated under the control of a merchant to obtain
information offered by a customer and transmitted by a computer operating under the
control of the customer over a publicly accessible packet-switched network (e.g., the
Internet) to the computer operating under the control of the merchant, without risking
the exposure of the information to interception by third parties that have access to
the network, and to assure that the information is from an authentic source. It is
further desirable for the merchant to transmit information, including a subset of the
information provided by the customer, over such a network to a payment gateway computer
system that is designated, by a bank or other financial institution that has the
responsibility of providing payment on behalf of the customer, to authorize a
commercial transaction on behalf of such a financial institution, without the risk of
exposing that information to interception by third parties. Such institutions include,
for example, financial institutions offering credit or debit card services.

Brief Summary Text (15):
Another such attempt to provide such a secure transmission channel is a general-purpose
secure communication protocol such as Netscape, Inc.'s Secure Sockets Layer
(hereinafter "SSL"), as described in Freier, Karlton & Kocher (hereinafter "Freier"),
The SSL Protocol Version 3.0, March 1996, and hereby incorporated by reference. SSL
provides a means for secure transmission between two computers. SSL has the advantage
that it does not require special-purpose software to be installed on the customer's

computer because it is already incorporated into widely available software that many people utilize as their standard Internet access medium, and does not require that the customer interact with any third-party certification authority. Instead, the support for SSL may be incorporated into software already in use by the customer, e.g., the Netscape Navigator World Wide Web browsing tool. However, although a computer on an SSL connection may initiate a second SSL connection to another computer, a drawback to the SSL approach is each SSL connection supports only a two-computer connection. Therefore, SSL does not provide a mechanism for transmitting encoded information to a merchant for retransmission to a payment gateway such that a subset of the information is readable to the payment gateway but not to the merchant. Although SSL allows for robustly secure two-party data transmission, it does not meet the ultimate need of the electronic commerce market for robustly secure three-party data transmission. Other examples of general-purpose secure communication protocols include Private Communications Technology ("PCT") from Microsoft, Inc., Secure Hyper-Text Transport Protocol ("SHTTP") from Terisa Systems, Shen, Kerberos, Photuris, Pretty Good Privacy ("PGP") which meets the IPSEC criteria. One of ordinary skill in the art readily comprehends that any of the general-purpose secure communication protocols can be substituted for the SSL transmission protocol without undue experimentation.

Detailed Description Text (2):
A preferred embodiment of a system in accordance with the present invention is preferably practiced in the context of a personal computer such as the IBM PS/2, Apple Macintosh computer or UNIX based workstation. A representative hardware environment is depicted in FIG. 1A, which illustrates a typical hardware configuration of a workstation in accordance with a preferred embodiment having a central processing unit 10, such as a microprocessor, and a number of other units interconnected via a system bus 12. The workstation shown in FIG. 1A includes a Random Access Memory (RAM) 14, Read Only Memory (ROM) 16, an I/O adapter 18 for connecting peripheral devices such as disk storage units 20 to the bus 12, a user interface adapter 22 for connecting a keyboard 24, a mouse 26, a speaker 28, a microphone 32, and/or other user interface devices such as a touch screen (not shown) to the bus 12, communication adapter 34 for connecting the workstation to a communication network (e.g., a data processing network) and a display adapter 36 for connecting the bus 12 to a display device 38. The workstation typically has resident thereon an operating system such as the Microsoft Windows NT or Windows/95 Operating System (OS), the IBM OS/2 operating system, the MAC OS, or UNIX operating system. Those skilled in the art will appreciate that the present invention may also be implemented on platforms and operating systems other than those mentioned.

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Search Results - Record(s) 1 through 9 of 9 returned.

☐ 1.   Document ID: US 20020194120 A1

L10: Entry 1 of 9   File: PGPB   Dec 19, 2002

PGPUB-DOCUMENT-NUMBER: 20020194120
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020194120 A1

TITLE: Consultative decision engine method and system for financial transactions

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐ 2.   Document ID: US 20020103752 A1

L10: Entry 2 of 9   File: PGPB   Aug 1, 2002

PGPUB-DOCUMENT-NUMBER: 20020103752
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020103752 A1

TITLE: E-commerce payment solution

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐ 3.   Document ID: US 20020029196 A1

L10: Entry 3 of 9   File: PGPB   Mar 7, 2002

PGPUB-DOCUMENT-NUMBER: 20020029196
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020029196 A1

TITLE: Vending machine for vending age-restricted products using a credit card and associated methods

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

☐ 4.   Document ID: US 20010037250 A1

L10: Entry 4 of 9   File: PGPB   Nov 1, 2001

PGPUB-DOCUMENT-NUMBER: 20010037250
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20010037250 A1

TITLE: Method and apparatus for selling international travel tickets in combination with duty free goods

`Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments`   `KWIC | Draw Desc | Image`

☐ 5.   Document ID: US 6473794 B1

L10: Entry 5 of 9   File: USPT   Oct 29, 2002

US-PAT-NO: 6473794
DOCUMENT-IDENTIFIER: US 6473794 B1

TITLE: System for establishing plan to test components of web based framework by
displaying pictorial representation and conveying indicia coded components of existing
network framework

`Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments`   `KWIC | Draw Desc | Image`

☐ 6.   Document ID: US 6373950 B1

L10: Entry 6 of 9   File: USPT   Apr 16, 2002

US-PAT-NO: 6373950
DOCUMENT-IDENTIFIER: US 6373950 B1

TITLE: System, method and article of manufacture for transmitting messages within
messages utilizing an extensible, flexible architecture

`Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments`   `KWIC | Draw Desc | Image`

☐ 7.   Document ID: US 6163602 A

L10: Entry 7 of 9   File: USPT   Dec 19, 2000

US-PAT-NO: 6163602
DOCUMENT-IDENTIFIER: US 6163602 A

TITLE: System and method for unified telephone and utility consumption metering,
reading, and processing

`Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments`   `KWIC | Draw Desc | Image`

☐ 8.   Document ID: US 5999908 A

L10: Entry 8 of 9   File: USPT   Dec 7, 1999

US-PAT-NO: 5999908
DOCUMENT-IDENTIFIER: US 5999908 A

TITLE: Customer-based product design module

`Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments`   `KWIC | Draw Desc | Image`

☐ 9.   Document ID: US 5058030 A

L10: Entry 9 of 9   File: USPT   Oct 15, 1991
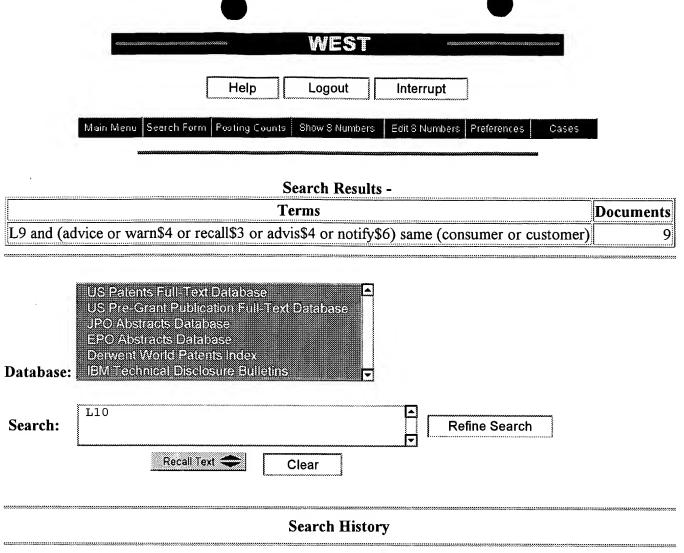
US-PAT-NO: 5058030
DOCUMENT-IDENTIFIER: US 5058030 A

TITLE: Optimizing mail processing by matching publisher and inserter entities

| Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | | KWIC | Draw Desc | Image |

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Terms	Documents
L9 and (advice or warn$4 or recall$3 or advis$4 or notify$6) same (consumer or customer)	9

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Search:

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L10
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Search History

DATE: Wednesday, January 15, 2003   Printable Copy   Create Case

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ		
L10	L9 and (advice or warn$4 or recall$3 or advis$4 or notify$6) same (consumer or customer)	9	L10
L9	L2 and (read$3 or config$6) same(resid$3 or locat$6) same (operating system or os or application or utilities or tsr)	50	L9
L8	L2 and read$3 same (resid$6 or locat$6) same (advice or warn$4 or recall$3 or advis$4 or notify$6)same (program$6 or software)	0	L8
L7	L2 and read$3 same (resid$6 or locat$6) same (advice or warn$4 or recall$3 or advis$4 or notify$6)	0	L7
L6	L2 and read$3 same (resid$6 or locat$6) same (advice or warn$4 or recall$3 or advis$4 or notify$6) same (relevanc$3 or program$6 or software application or pars$3)	0	L6
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L4	L2 and read$3 same (resid$6 or locat$6) same (advice or warn$4 or recall$3 or advis$4 or notify$6) same (determin$36 or defin$6) same (relevanc$3 or program$6 or software application or pars$3) same inspect$3	0	L4
L3	L2 and read$3 same (resid$6 or includ$3) same (advice or warn$4 or recall$ or safety advisory or notify$6) same (determin$36 or defin$6) same (relevanc$3 or program$6 or software application or pars$3) same inspect$3 same librar$4	0	L3
L2	(computer$6 or network$3 or database) same (broadcast$6 or transfer$6 or transmit$6 or send$3) near5 (document or fil$3 or data or information or info) same (customer or consumer) same third adj party	198	L2
	DB=USPT; PLUR=YES; OP=ADJ		
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END OF SEARCH HISTORY

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Search Results -

Terms	Documents
L11 and (advice or warn$4 or recall$3 or advis$4 or notify$6) same (consumer or customer)	2

Database:

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US Pre-Grant Publication Full-Text Database
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EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins
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Search:

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L14
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DATE: **Wednesday, January 15, 2003**   Printable Copy   Create Case

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L13	L9 and (advice or warn$4 or recall$3 or advis$4 or notify$6) same (consumer or customer)	9	L13
L12	L11 and (read$3 or config$6) same(resid$3 or locat$6) same (operating system or os or application or utilities or tsr)	2	L12
L11	(6119164 or 6029195 or 5704044 or 6098099 or 5722418).pn.	10	L11
L10	L9 and (advice or warn$4 or recall$3 or advis$4 or notify$6) same (consumer or customer)	9	L10
L9	L2 and (read$3 or config$6) same(resid$3 or locat$6) same (operating system or os or application or utilities or tsr)	50	L9
L8	L2 and read$3 same (resid$6 or locat$6) same (advice or warn$4 or recall$3 or advis$4 or notify$6)same (program$6 or software)	0	L8
L7	L2 and read$3 same (resid$6 or locat$6) same (advice or warn$4 or recall$3 or advis$4 or notify$6)	0	L7
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L5	L2 and read$3 same (resid$6 or locat$6) same (advice or warn$4 or recall$3 or advis$4 or notify$6) same (relevanc$3 or program$6 or software application or pars$3) same inspect$3	0	L5
L4	L2 and read$3 same (resid$6 or locat$6) same (advice or warn$4 or recall$3 or advis$4 or notify$6) same (determin$36 or defin$6) same (relevanc$3 or program$6 or software application or pars$3) same inspect$3	0	L4
L3	L2 and read$3 same (resid$6 or includ$3) same (advice or warn$4 or recall$ or safety advisory or notify$6) same (determin$36 or defin$6) same (relevanc$3 or program$6 or software application or pars$3) same inspect$3 same librar$4	0	L3
L2	(computer$6 or network$3 or database) same (broadcast$6 or transfer$6 or transmit$6 or send$3) near5 (document or fil$3 or data or information or info) same (customer or consumer) same third adj party	198	L2
DB=USPT; PLUR=YES; OP=ADJ			
L1	(computer$6 or network$3 or database) same (broadcast$6 or transfer$6 or transmit$6 or send$3) near5 (document or fil$3 or data or information or info) same (customer or consumer) same third adj party	86	L1

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